

SEQUENCE LISTING

<110> Toque, Bruno
 Bracco, Laurent
 Schweighoffer, Fabien

<120> Genetic Markers of Toxicity, Preparation
 and Uses

<130> 50146/003002

<150> PCT/FR00/02503

<151> 2000-09-12

<150> FR 99/11405

<151> 1999-09-13

<150> 09/456,370

<151> 1999-12-08

<160> 37

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 225

<212> DNA

<213> Homo sapiens

<400> 1

```
tggggcggagg ggacaggaga caggagcaga gcagcagctg agcagcgctc ctccccggcc 60
agctctccac agcccacctc cggccaacag ccttgctgt caaggaaagt acactccgag 120
cggtcaggct ggggctgctg ccagcgagtc cctcttcgtc tctaaccacg cctattaagc 180
ggaggtgttc ccaggctgcc cccaacactc caggccctca ctgcg 225
```

<210> 2

<211> 186

<212> DNA

<213> Homo sapiens

<400> 2

```
tgggggggagg gaggggaaat tcaattttac ggtccagccg tcctggccgt agcaggggccg 60
gatccagggt gtctgctctg tttgtggcca tgattacctt gacattgaca ttctgatcaa 120
atccatccat ctgattcagc agtccagca ggatcctctg aacctccctg tcggccccta 180
ccagc 186
```

<210> 3

<211> 206

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 67

<223> n = A,T,C or G

<400> 3

```
ggatgatgag gagagcggtt cggtcggagg ggatggagga aggcgagttt tagaggcccg 60
```

tgaaganatg	gctgcccttg	agaaggatta	tgaggaggtt	ggtgtggatt	ctgttgaagg	120
agagggtgag	gaagaaggag	aggaatctaa	ttatccattc	cttttggccc	tgccctcat	180
aacgcttctc	tcatcatcca	atcact				206

<210> 4
 <211> 237
 <212> DNA
 <213> Homo sapiens

<400> 4						
cgggtggagg	tacagggctt	ggggaccatg	atgcttctgg	tagctttgaa	tgtcatacca	60
cacctccctt	tggccaggca	gatagacctg	gacaccatgg	gctccagagt	ctgatacagg	120
gtgaaccagc	aacgcatccc	caagcaagta	ctgatcatct	atattgaagg	tagtcacatc	180
ctgaggggtac	tgcaccacga	ggggcctcat	gacaggaata	cctcccacga	aacgctt	237

<210> 5
 <211> 152
 <212> DNA
 <213> Homo sapiens

<400> 5						
agccccagtt	tcggccctgg	cacctggggg	gaactcaggc	aatccgattt	acgacttttt	60
tctgggacga	gagctcaacc	ctcgtatctg	tttcttcgac	ttcaaataatt	tctgtcaact	120
gcgaccggc	ctcatcggt	gggtcctcat	ca			152

<210> 6
 <211> 241
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 20, 49
 <223> n = A,T,C or G

<400> 6						
tcaaagggtg	atagtctgan	agctctcaac	acacatgggc	ttgccaggna	accatatcaa	60
caatggcagc	atcaccagac	ttcaagaatt	tagggccatc	ttccagcttt	ttaccagaac	120
ggcgatcaat	cttttccttc	agctcagcaa	acttgcattg	aatgtgagcc	gtgtggcaat	180
ccaatacagg	ggcatagccg	gcgcttattt	ggcctggatg	gttcaggata	atcacctccc	240
c						241

<210> 7
 <211> 301
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 171, 261
 <223> n = A,T,C or G

<400> 7						
tgcgttgagg	gggctgggtg	gctgctgggt	ccctgggtact	gcctgtgtcc	ccctccttgg	60
ttccttccgg	gattttgcag	atgggtcggt	gggcttccgc	accagctcta	ggcgctcctt	120
ctgcttctgc	agctcctcaa	tctctcgctg	cagcccagat	ttctatcttc	ngtttgcag	180
tctccgcctg	caggaaagtc	ggtcagttcc	ttcctccggt	tcctgcactt	ggccgcagcc	240
agcttggtcc	gctcgcgctt	netcggcggc	gctcctcttc	ctccgggctg	atctgttaca	300
c						301

<210> 8
 <211> 149
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 88
 <223> n = A,T,C or G

<400> 8
 tggggggcagg gcttgcctta cttcctggag gaagcccga gacaggactg tggccgcca 60
 cacccttc aacctgagct gccaagcnc agggacccc agagcccgtg gacctactct 120
 ggctccagga tgctgtccc ctcctgtca 149

<210> 9
 <211> 271
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 66
 <223> n = A,T,C or G

<400> 9
 atgaggaggg ggcaaaccgt tctcagcggg ggtggaggcc gcttcacccc agggggccag 60
 caggggaggg tgggtggacc gggggcttct ccatcttaaa gtggaactgg aggaagaact 120
 gcttgggtctc ccggttccag tgtgtccaga acttgccctc cgcttgtctg atctctctgc 180
 tcggcacctt gaaggcaatg gtctcgtagg gctcagcggc catgagcagg tactgccagc 240
 gccggtccgg aggtcgcagc cctgcgcga c 271

<210> 10
 <211> 224
 <212> DNA
 <213> Homo sapiens

<400> 10
 gcgggctagg ggactaagtt gtcaaataca gtctcaccta attacaggag cggtagacgcg 60
 atcctggact tctagcctct ttccacgggt agagttcaca agacagacta gacacagtgc 120
 agcaggagaa atgaaacgca ggctctgctt ggccccgggg cctcctcacc cgcacacctg 180
 ccagccccga gacggccgag gcttacacgt ctgcctcccc acta 224

<210> 11
 <211> 288
 <212> DNA
 <213> Homo sapiens

<400> 11
 tggactgagg ggctgaagcg gctggccaag tccgacccca tgggtgcagt catcatcgag 60
 gagtcgggag agcatatcat cgcgggcgcc ggcgagctgc acctggagat ctgcctgaag 120
 gacctggagg aggaccacgc ctgcatcccc atcaagaaat ctgacccggt cgtctctgtac 180
 cgcgagacgg tcagtgaaga gtcgaacgtg ctctgcctct ccaagtcctc caacaagcac 240
 aaccggctgt acatgaaggc gcggcccttc cccgacggcc tcccacag 288

<210> 12
 <211> 219
 <212> DNA
 <213> Homo sapiens

<400> 12
 ggggctgagg ggacatggac gccatgctct gaagggtttt gtccttgag acctgggtccg 60
 gttcatggcc ttgatgccaa cctgggtactc ccgcaccttc ttccgagcta gaacctgtat 120
 gtggctggac acctgtcttc tcgtccgagt cttccccgtc ctcagtttaa tatagcgtgc 180
 aatcaactca tttcggccgt acatcttgcc ctctctact 219

<210> 13
 <211> 111
 <212> DNA
 <213> Homo sapiens

<400> 13
 ctgtggcagg ctgtctgctc aacaaaaacgc tcccacctgg tttgggtatg caaggcactg 60
 cgcateccag gccatccacg gccatccacc catccatcca acctccccca t 111

<210> 14
 <211> 297
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 6, 10
 <223> n = A,T,C or G

<400> 14
 gggaangaan gttggctttg ggtgcgtgta ccgggcggtg atgaggaaac acggtgtatg 60
 ctgtgaagag gctgaaggag aacgctgacc tggagtggac tgcagtgaag cagagcttcc 120
 tgaccgaggt ggagcaggct gtccaggttt cgtcacccaa acattgtgga ctttgctggc 180
 tctgtgctca gaacggcttc tactgcctgg tgtacggctt cctgcccac ggctccctgg 240
 aggaccgtct ccactgccag acccaggcct gccacctct ctcttgacct cccggca 297

<210> 15
 <211> 331
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 6, 19, 24, 61, 331
 <223> n = A,T,C or G

<400> 15
 ggggancagg tcagcatgna cagnatttct accactccaa acgccgggtg atcttctcca 60
 ngagggaagcc ctaatccgcc cacaggaagc ctgcagtcct ggaagcgca ggggcctcaa 120
 aggcccgtc tacatcttct gccttagtct agtttgtgtg tcttaattat tatttgtgtt 180
 ttaatttaaa cacctcctca tgtacatacc ctggccgcc cctgccccac tcatttacac 240
 caaccacca actatctata aacctagcca tggccatccc cttatgaagc gggcacagtg 300
 attataggct ttcgctctaa gaattaaaga n 331

<210> 16
 <211> 273
 <212> DNA
 <213> Homo sapiens

<400> 16
 cggtaggagg gtgaaggcct cctcagactc cggggtggca acctctggca ggccccagct 60
 cagatcaagg gaagcccaga catctcttct gggaagccca ggtcatcagg gatcttgcag 120
 gcaggtcggg gagctgccag gatgaactct agtttttct tctccttcag caggttggca 180

atctcgggtct gcaaagcaga cttctcatct tctagttggt ctgtctccgc ttggagtga 240
 taagtcagct ccctctccgg ttgcggaatt tgg 273

<210> 17
 <211> 145
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 8, 9, 18, 24, 32, 33, 85
 <223> n = A,T,C or G

<400> 17
 tcgcgaanng ggctgaangc tagncaaacc gnnccgatcat gtcgcacaaa caaatttact 60
 attcggacaa atacgacgac gaggnagttt gagtatcgac atgtcatgct gcccaaggac 120
 atagccaagc tggtccttac ctccc 145

<210> 18
 <211> 334
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 64
 <223> n = A,T,C or G

<400> 18
 tttgtgcagg ggggctgtcc ccttggcccc agactcctct tcatcatcat cctgcctggg 60
 ccgnatggac tgggtcttccc tctcttcagc cgctcattga gtgccttcag ggccagttgc 120
 cttctccgct cggcgtcttg agggctctgtg cctggcaggc tgatggtgat ggaggatggg 180
 gcaccacat cgtagcgctt caccgtcttc tggcatatct ttaccttcac caggaggctg 240
 tgcaccaagt tcgccagcaa acccaccaca ggctgcagga tctcagggaa gaaagtggcg 300
 aaagcaaagt ggtcagccat gtccccctctc gcac 334

<210> 19
 <211> 245
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 43
 <223> n = A,T,C or G

<400> 19
 agcgttttga gttgaggggc cgatcctgac aaagccggca agnaaccag tcatggagcc 60
 tgaacgagaa agagggcgtgg gcctcaagta cgagctcatc tccgagaccg ggggcagcca 120
 cgacaagcgc ttcgtcacgg aggtcgaagt ggatggacag aagttccaag gtgctggttc 180
 caacaaaaag gtggcgaagg cctacgctgc tcttgctgcc ctagaaaagc ttttcctcc 240
 catga 245

<210> 20
 <211> 178
 <212> DNA
 <213> Homo sapiens

<220>

<221> misc_feature
 <222> 15
 <223> n = A,T,C or G

<400> 20
 ggggggtaagg cgganatgag atggggggccg ctgtggcctc aggcacagcc aaaggagcaa 60
 gaagacggcg gcagaacaac tcagctaaac agtcttggt gctgaggctg tttgagtcaa 120
 aactgtttga catctccatg gccatttcat acctgtataa ctccaaggag cctgattt 178

<210> 21
 <211> 163
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 21, 22
 <223> n = A,T,C or G

<400> 21
 ggttgccaggc ccacacccaa nncgtctaca actaccacct cagtccccgc gccttctctgc 60
 actaccctgg gctgggtggtg cccagagccc agcgccctga caagtgcccg ctgccgccca 120
 tggcacccga gacccaccg gtcctctctc cggcctgccca ggc 163

<210> 22
 <211> 296
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 8, 11, 16, 25, 283
 <223> n = A,T,C or G

<400> 22
 ggattcgngg ncgaantgcc gtggnacatt actggcactg gcacctgtgc tgggactgcc 60
 aattccccgc agctcacggc actcagctta cttgagagtt tgaccataga ctccccgggtg 120
 gcatcaggtg actcaagcag tgggtggggac ttcactgctt gctggctgtc tgagcgtctc 180
 agagtacccc ccacccgccg gcgcagcatc ttcctgatac tgccgccaga tttcttacca 240
 tcagttcatc aaccatggac tgcaagcaga tgctaataat ganagcctcc ccacaa 296

<210> 23
 <211> 310
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 3, 33, 34
 <223> n = A,T,C or G

<400> 23
 aangcgatct cctgctgatg gtggtagagg ccnnaaaatt gctcatttgg gccttcagtg 60
 ggtcgtccac ctccacatcg atgtcgtaac aggcgtgtctt cttctgggtcg ttaggggtcga 120
 cactaatgac atggttgatg acaatggggc ctggatgctg cagcaaccct gccagcttca 180
 tgggaatctc ggagaaacgg agtcggccca actgaagatc tggcggaagt aacggttgca 240
 gttgatgtac tcccgtcctg gccatcctg cagctgggtg tgcttgatgt aaagccacag 300
 ggctgccac 310

<210> 24
 <211> 232
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 230
 <223> n = A,T,C or G

<400> 24
 gtgaggtagg cagctgagtt gatgcagcag gtcaacgtat tgaaacttac tgttgaagac 60
 ttggagaaaag agagggattt ctcttcggaa agctcgggaa attgaattga tttgccagga 120
 gacgagggggg aaaacgaccc tgtattgcag aggattgtag acattctgta tgcccagatg 180
 aaggctttgt gatcctgatg aaggggggcc acaggaggag caagaagagn at 232

<210> 25
 <211> 231
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 18, 203, 220
 <223> n = A,T,C or G

<400> 25
 tccggcgagg cttttggngc tgctaaaatg ccggattcct cggtgccgat cagcgggaaga 60
 ccaaagagga tgagaaggac gacaagccca tccgagctct ggatgagggg gatattgcct 120
 tgttgaaaac ttatggtcag agcacttatt ctaggcagat caagcaagtt gacgatgaca 180
 ttcagcaact tctcaagaaa atnatgagct cactgggatn aagaatctga c 231

<210> 26
 <211> 301
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 26
 <223> n = A,T,C or G

<400> 26
 aatgaggggtg gtgaagccgg gcagcntgct tggcgaaact cacagtctta atgatgcact 60
 tgggtggagag ttactgaac ttgtcccaga ggtcaatgtc cagagagaca cgttggttctg 120
 agctgttggtt cgtagtgtat ttgcccagct ggcagagggc agggaagggt tcttggtgctg 180
 ctttgcgcac cttctcaatg agctccccc cctccggcgt cagcgtgtag ctctcagagc 240
 actcgggctt gggcacctcc ttcttcttct tgtttcggtc gtttctacag actccctggc 300
 c 301

<210> 27
 <211> 279
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 4, 6, 18, 198
 <223> n = A,T,C or G

<400> 27
 ggggnangggg acccacgnat gatgtgggga gcttccctctg cagtttctgc acctcacacg 60
 cacgttgggtg cccccgatac aggcgtgaca ggaggcgccc atgtagtctc ctagtgccat 120
 gaccaccttc tgtatctgct gagccaattc tcgagtgggt gctaggacca aggcctgggt 180
 ggcttttaga tctaattnat ctgctgcaga atcgatatgg caaatgtggc cgttttccca 240
 gtcccagatt gggcttgagc aatcacatca taacccttc 279

<210> 28
 <211> 295
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 6, 7, 11, 17, 18, 31, 32, 41, 74
 <223> n = A,T,C or G

<400> 28
 atgggnnggg naccagnntg tctgccttcg nntcataagg nccgactggt tgatgacctc 60
 ggggtgccatc cagnaattggg gtgcccacga aggtgttctt tttgatctgg gtgtctgtca 120
 gctggccagc cagcccaaag tccgccagct tcacctcgcc atgctcagac agcaggacgt 180
 tggccgcttt aatgtctctg tggattttct tctccgaatg gagataatcg agtcctttca 240
 gtattttctct taatataagt aagcgatctg ggtttcatct aatgggccag gttct 295

<210> 29
 <211> 348
 <212> DNA
 <213> Homo sapiens

<400> 29
 gcttgtaagg kgggacaggg gcmcccgagg ctgcagkggg agcccatggg gacactatac 60
 argggcacaa gttttccaac tatraactcc taacctaatc gacttyttcc atgcraracs 120
 catcctcatc gccctcgaga ggggggatct matcaggaac tgcagcattg ggttcctctg 180
 ctgccacttc atyttcatca atacctaaac ctagcttgat catgcaataa atgcggttgg 240
 agtgggtctg gggatcctca ggggaaaagc cagaagatag cagggcggtt tcaaacagca 300
 gcaccaccag gtccttaact gccttatcat tcttgtcggc ctaacctt 348

<210> 30
 <211> 450
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 385, 408, 411, 422, 434
 <223> n = A,T,C or G

<400> 30
 gcggggggagg tgtcttcaat aggcccaaaa tcaccgtctc caggtggcca gataaggctg 60
 acttcagtgc tgatgcaagt tccttttttg tccttctctg gtaggcgaag gcaatatcct 120
 gtctctgtgc attgctgcgg ttggtcaaaa tggtgacaat ggtgacctca tccacacctt 180
 tggctcttgat ggctgtttca atgttcaaag catcccgctc agcatcaaag ttagtatagg 240
 ctttgacaga cccatatgca cttgggggtg tagagtgatc accctccaag ctgagcttgc 300
 acaggatttc gtgaacagta gacattttga aggaagcttc ctgaggccaa tgtgttcaac 360
 caagcggaaa ctctccgggt agagngaaac ccaagttgct atctcaanaa ncctgcaaaa 420
 anacgctttt aatnctagtg cgccgcctga 450

<210> 31
 <211> 492

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 188, 436, 468, 477, 478
<223> n = A,T,C or G

<400> 31
ccagaggtgg aggggaatat ggtcagtagg acagaaggta acattgatga ctcgctcatt 60
ggtggaaatg cctccgctga agggcccgag ggcgaaggta ccgaaagcac agtaatcact 120
ggtgtcgata ttgtcatgaa ccatcacctg caggaaacaa gtttcacaaa agaagcctac 180
aagaagtnc acaaagatta catgaaatca atcaaaggga aacttgaaga acagagacca 240
gaaagagtaa aaccttttat gacaggggct gcagaacaaa tcaagcacat ccttgcta 300
ttcaaaaact accagttctt tattggtgaa aacatgaatc cagatggcat ggttgctcta 360
ttggactacc gtgaggatgg tgtgccccat aatgatttct ttaagggtgg taaaaatgga 420
aatgtacca atgtgnaata ttttgactat cccttgcccc ataccttnta atctagnngg 480
ccctgagtca ct 492

<210> 32
<211> 251
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 187, 211, 233
<223> n = A,T,C or G

<400> 32
cagcattcag ttcttcaaat cgggcacggg taatggaggt atagaagtcg attccttcat 60
agagagaatc gatctcaata ctggcctggg tgctggaaga gaggggtacgc ttagcacggt 120
cacaagcagt acggaggcgt cttacagctc tcttggttctc actgatgtcc ttcttatgct 180
tgcgttnaac tcagcaataa aatgggtgac nattcggttg taaaatcttc tcncccaagt 240
gggtgtctcc a 251

<210> 33
<211> 212
<212> DNA
<213> Homo sapiens

<400> 33
gaaagcgtta ttgtggccgg tcgatctcca agactggact gtacgtctca gctctgtgag 60
cgctgctctca gcagctccaa cctcagcaga ctgtgtgggtg accactgtgg tgctctcctc 120
aatctgctga gaccagtact tgtctagctc ctctcggttc ttccgagcca gctcgtcata 180
ttggggccgg atgtctgcca tgatcttggc ga 212

<210> 34
<211> 186
<212> DNA
<213> Homo sapiens

<400> 34
actgatccct gccctcaaga ctcatcgaca agtctagtga gaaatggcgt ggactacgtg 60
atcatgggca tgccacacag agggcggctg aacgtgcttg caaatgtcat caggaaggag 120
ctggaacaga tcttctgtca attcgattca aagctggagg cagctgatga gggctccgga 180
gatgtg 186

<210> 35

<211> 120
 <212> DNA
 <213> Homo sapiens

<400> 35
 ggatgatgag gagaacgtta tggggaggag ggggtgaggt cttggtgagt gtttttagtgg 60
 ggtagcgat ggaggttaga ttggtgctgt gggtgaaaga gtatgatggg gtggtggttg 120

<210> 36
 <211> 314
 <212> DNA
 <213> Homo sapiens

<400> 36
 ggggtgtagg gggacttcaa actctactcc cactaatagc tttttgatga cttctagcaa 60
 gcctcgctaa cctcgcccta cccccacta ttaacctact gggagaactc tctgtgctag 120
 taaccacgtt ctctgatca aatatcactc tcctacttac aggactcaac atactagtca 180
 cagccctata ctccctctac atattttacca caacacaatg gggctcactc acccaccaca 240
 ttaacaacat aaaaccctca ttcacacgag aaaacaccct catgttcata cacctatccc 300
 ccattctcct ccta 314

<210> 37
 <211> 258
 <212> DNA
 <213> Homo sapiens

<400> 37
 ggatgatgag gagagcgtat ggggcggagg tttaggtatt gtagcgcgtg gctcgtaggc 60
 ccaccgagga acagggcgga gtagcgccg agcttggtatg agcggagaga cctgcaccgg 120
 tggcaccatc ttgtcctgac ctccccggat acgctttcct catcatcaat cactagtgcg 180
 gcgctgcagg tcgaccatat gggagagctc ccaacgcgtt ggatgcatag cttgagtatc 240
 tatagtgtca cctaaata 258